

Appl. No. 09/840,552

Amendment Dated March 1, 2004

Reply to Office Action of November 28, 2003

In the Claims:

Claim 1 (Canceled).

Claim 2 (Currently Amended). A method of cleaning and coating a surface of an article having a metallic base body, the method which comprises:

cleaning by generating a plasma with electrically positively charged ions, accelerating the ions towards the article, and bringing the ions into contact with the base body for cleaning the base body;

directing an electron beam of electrons onto the base body;

controlling an outgoing flow of the electrons coming into contact with the base body by connecting the base body to a reference potential via a switch at a given switching frequency;

coating the metallic base body;

continuing the cleaning step during at least a part of the coating step; and

~~selecting the given frequency from the group consisting of an adjustable frequency and a regulated frequency~~

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regulating the switching frequency during the coating step.

Claim 3 (Previously Presented). The method according to claim 2, which further comprises alternately opening and closing the switch to define an outgoing flux of the electrons in an electric outgoing line connected to the base body.

Claim 4 (Previously Presented). The method according to claim 2, which further comprises:

adjusting the switching frequency in a range from a minimum in a hertz range to a maximum of 27 MHz.

Claim 5 (Previously Presented). The method according to claim 4, which further comprises:

adjusting the switching frequency to substantially 50 kHz.

Claim 6 (Canceled).

Claim 7 (Previously Presented). The method according to claim 2, which further comprises controlling the outgoing flux of the electrons such that a bias voltage of substantially between 100 V and 1000 V is established between the electrically positively charged plasma and the base body.

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Claim 8 (Previously Presented). The method according to claim 2, which further comprises determining a bias voltage between the electrically positively charged ions of the plasma and the base body.

Claim 9 (Previously Presented). The method according to claim 2, wherein the generating step comprises generating the plasma with the electron beam.

Claim 10 (Previously Presented). The method according to claim 2, which further comprises forming the plasma with a gas.

Claim 11 (Previously Presented). The method according to claim 2, which further comprises forming the plasma with a noble gas.

Claim 12 (Previously Presented). The method according to claim 2, which further comprises forming the plasma with argon.

Claim 13 (Previously Presented). The method according to claim 31, which comprises forming the plasma with hydrogen.

Claim 14 (Previously Presented). The method according to claim 2, which further comprises:

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initially heating the article without a gas for forming a plasma; and

adding the gas for forming the plasma.

Claim 15 (Previously Presented). The method according to claim 14, which further comprises heating the article by irradiation with the electrons.

Claim 16 (Previously Presented). The method according to claim 2, which further comprises, concurrently with cleaning the article, heating the article to a coating temperature.

Claim 17 (Original). The method according to claim 16, which comprises heating the article to a coating temperature of over 800°C.

Claim 18 (Previously Presented). The method according to claim 2, which further comprises providing a gas turbine component as the article and cleaning a surface of the gas turbine component.

Claim 19 (Original). The method according to claim 18, which comprises selecting the gas turbine component from the group consisting of a turbine blade and a heat shield element.

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Claim 20 (Previously Presented). The method according to claim 2, which further comprises rotating the article about an axis of rotation.

Claim 21-23 (Canceled).

Claims 24-29 (Canceled).

Claim 30 (Previously Presented). The method according to claim 10, wherein the gas is an inert gas.

Claim 31 (Previously Presented). The method according to claim 10, wherein the gas is a reactive gas.

Claim 32 (Previously Presented). The method according to claim 2, which further comprises adjusting the switching frequency to a maximum of 27 MHz.

Claim 33 (Canceled). The method according to claim 2, which further comprises continuously regulating the switching frequency throughout the cleaning step and the part of the coating step.